



## SYSTEM C

# Head Specifications Summary

## Professional Condenser Microphone Elements

### Electro-Voice® model CH15E hypercardioid element

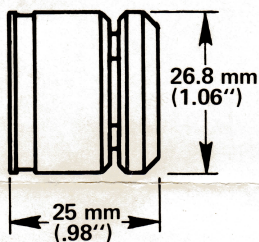


FIGURE 1 - Dimensions

**SPECIFICATIONS**  
**Frequency Response:**  
 55 Hz - 13.5 kHz  
**Polar Characteristics:**  
 (see figures 3 & 4)  
**Element Capacitance:**  
 25 pF  
**Output Level (w/PE 15):**  
 -40 dB ref  
 (0 dB 1 mW/10 dynes/cm<sup>2</sup>)  
**EIA Sensitivity Rating (w/PE 15):**  
 -132 dB  
**Dimensions,**  
**Length:**  
 25 mm (.98")  
**Diameter:**  
 26.8 mm (1.06")  
**Weight:**  
 46.8 g (1.65 oz)  
**Accessory Included:**  
 315A Windscreen

The CH15E is a Single-D hypercardioid device with greatest off-axis rejection at 120° off-axis  $\pm 10$  degrees.

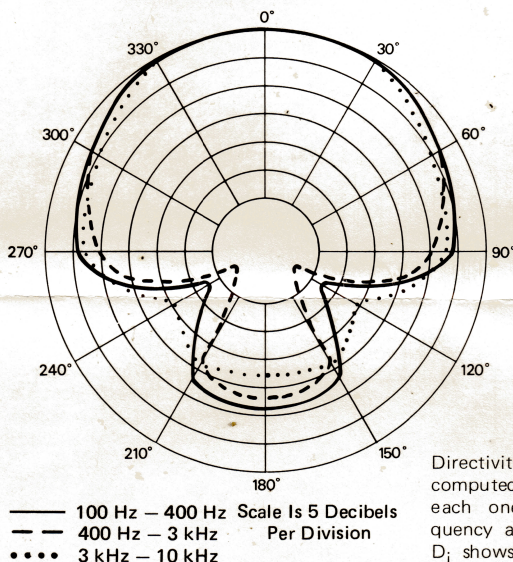


FIGURE 3 - Polar Response

Polar response is measured with the microphone facing (aimed at) 0°, then rotated through 360°. The sound source is 1.5 m (5') from the microphone diaphragm.

100 Hz	-.26
250 Hz	-.24
500 Hz	-.25
800 Hz	-.24
2.5 kHz	-.20
3.15 kHz	-.23
4 kHz	-.2
6.3 kHz	-.19
8 kHz	-.13

FIGURE 4 -  
Directivity Index

Directivity Index (see Figure 4) is computed from polar curves run at each one-third octave center frequency across the frequency range.  $D_i$  shows directivity in dB with respect to on-axis frequency response and may be applied to the on-axis response to show power response. (See Acoustical Engineering, Olsen, pp 331 & 332) This data is useful in pre-determining regenerative feedback conditions for directional elements and random incidence response for omnidirectional elements.

### Electro-Voice® model CO15E omnidirectional element

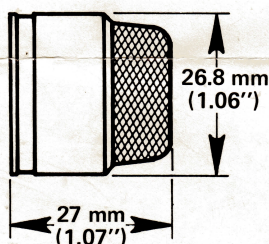


FIGURE 1 - Dimensions

**SPECIFICATIONS**  
**Frequency Response:**  
 20 Hz - 20 kHz  $\pm 2.5$  dB  
**Polar Characteristics:**  
 (see figures 3 & 4)  
**Element Capacitance:**  
 18 pF  
**Output Level (w/PE 15):**  
 -49 dB ref  
 (0 dB 1 mW/10 dynes/cm<sup>2</sup>)  
**EIA Sensitivity Rating (w/PE 15):**  
 -141 dB  
**Dimensions,**  
**Length:**  
 27 mm (1.07")  
**Diameter:**  
 26.8 mm (1.06")  
**Weight:**  
 42.5 g (1.5 oz)  
**Accessory Included:**  
 315A Windscreen

The CO15E is an omnidirectional device which exhibits little if any off-axis attenuation. See figures 3 & 4.

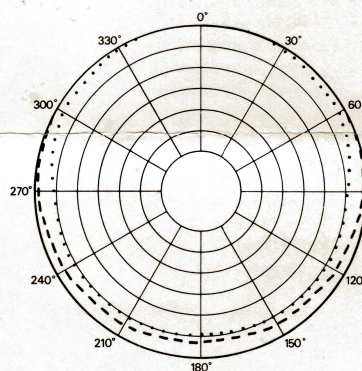


FIGURE 3 - Polar Response

Polar response is measured with the microphone facing (aimed at) 0°, then rotated through 360°. The sound source is 1.5 m (5') from the microphone diaphragm.

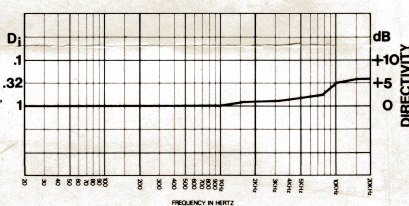


FIGURE 4 - Directivity Index

Directivity Index (see Figure 4) is computed from polar curves run at each one-third octave center frequency across the frequency range.  $D_i$  shows directivity in dB with respect to on-axis frequency response and may be applied to the on-axis response to show power response. (See Acoustical Engineering, Olsen, pp 331 & 332) This data is useful in pre-determining regenerative feedback conditions for directional elements and random incidence response for omnidirectional elements.

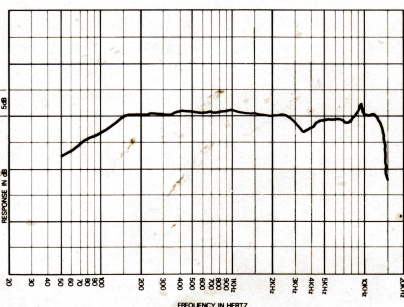


FIGURE 2 - Frequency Response

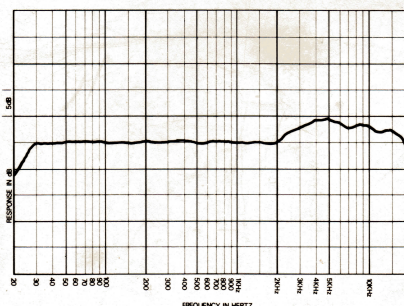


FIGURE 2 - Frequency Response



## Electro-Voice® model CS15E single-d element

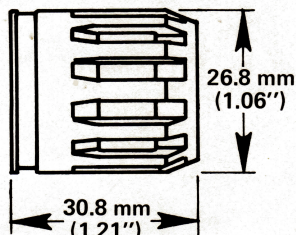


FIGURE 1 - Dimensions

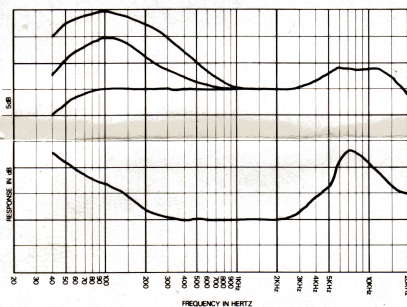


FIGURE 2 - Frequency Response

**SPECIFICATIONS**  
**Frequency Response:**  
 40 Hz - 18 kHz  
**Polar Characteristics:**  
 (see figures 3 & 4)  
**Element Capacitance:**  
 27 pf  
**Output Level (w/PE 15):**  
 -45 dB ref  
 (0 dB 1 mW/10 dynes/cm<sup>2</sup>)  
**EIA Sensitivity Rating (w/PE 15):**  
 -137 dB  
**Dimensions,**  
**Length:**  
 30.8 mm (1.21")  
**Diameter:**  
 26.8 mm (1.06")  
**Weight:**  
 49.6 g (1.75 oz)  
**Accessory Included:**  
 315A Windscreen

The CS15E is a Single-D cardioid device with greatest off-axis rejection at 180°. A Single-D cardioid exhibits proximity effect as shown in figure 2.

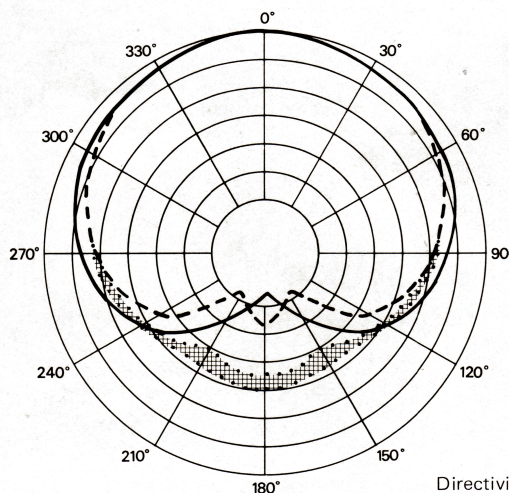


FIGURE 3 - Polar Response

Polar response is measured with the microphone facing (aimed at) 0°, then rotated through 360°. The sound source is 1.5 m (5') from the microphone diaphragm.

80 Hz	— .30
250 Hz	— .27
1.6 kHz	— .23
5 kHz	— .21
6.3 kHz	— .38
8 kHz	— .6
10 kHz	— .3
15 kHz	— .28

FIGURE 4 - Directivity Index

Directivity Index (see Figure 4) is computed from polar curves run at each one-third octave center frequency across the frequency range.  $D_i$  shows directivity in dB with respect to on-axis frequency response and may be applied to the on-axis response to show power response. (See Acoustical Engineering, Olsen, pp 331 & 332) This data is useful in pre-determining regenerative feedback conditions for directional elements and random incidence response for omnidirectional elements.

## Electro-Voice® model CL42E cardiline® condenser element

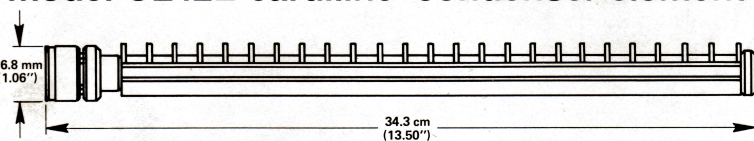


FIGURE 1 - Dimensions

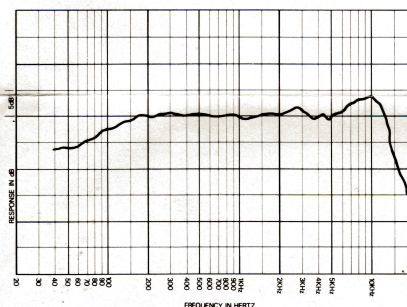


FIGURE 2 - Frequency Response

**SPECIFICATIONS**  
**Frequency Response:**  
 90 Hz - 12 kHz  
**Polar Characteristics:**  
 (see figures 3 & 4)  
**Element Capacitance:**  
 30 pf  
**Output Level (w/PE 15):**  
 -33 dB ref  
 (0 dB 1 mW/10 dynes/cm<sup>2</sup>)  
**EIA Sensitivity Rating (w/PE 15):**  
 -125 dB  
**Dimensions,**  
**Length:**  
 34.3 cm (13.50")  
**Diameter:**  
 26.8 mm (1.06")  
**Weight:**  
 149 g (5.3 oz)  
**Accessory Included:**  
 Special CL42 Windscreen

The CL42E is a Cardiline® or line interference device of a highly directional nature (see figures 3 & 4).

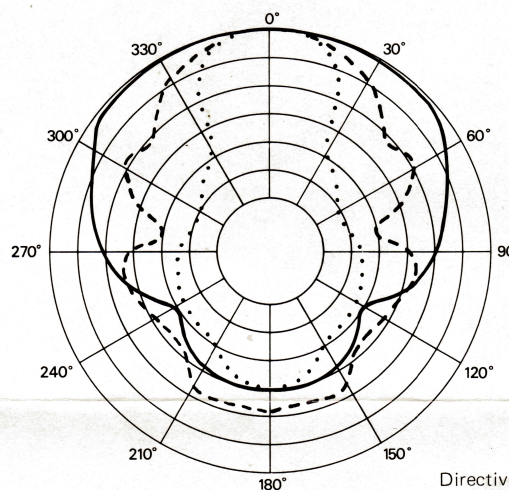


FIGURE 3 - Polar Response

Polar response is measured with the microphone facing (aimed at) 0°, then rotated through 360°. The sound source is 1.5 m (5') from the microphone diaphragm.

100 Hz	— .25
160 Hz	— .19
315 Hz	— .18
1 kHz	— .17
2.5 kHz	— .09
4 kHz	— .08
8 kHz	— .02

FIGURE 4 - Directivity Index

Directivity Index (see Figure 4) is computed from polar curves run at each one-third octave center frequency across the frequency range.  $D_i$  shows directivity in dB with respect to on-axis frequency response and may be applied to the on-axis response to show power response. (See Acoustical Engineering, Olsen, pp 331 & 332) This data is useful in pre-determining regenerative feedback conditions for directional elements and random incidence response for omnidirectional elements.